

ABSTRACT

A tunable optical filter utilizes multiple electroholographic (EH) gratings with different center wavelengths to filter an optical signal over a wide wavelength range. The EH gratings are connected such that an input optical signal passes through at least one of the EH gratings. The EH gratings are activated and tuned by electrode pairs that are controlled through a voltage controller. The tunable optical filter is coarse tuned by activating the EH gratings having a wavelength range that includes the center wavelength that is to be filtered and fine tuned by adjusting the voltage that is applied across the activated EH gratings.